L. Helms

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1642

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RAW SEQUENCE LISTING DATE: 08/24/2000
PATENT APPLICATION: US/09/359,326A TIME: 14:51:23

Input Set : A:\Reiteri4.app
Output Set: N:\CRF3\08232000\I359326A.raw

<110> APPLICANT: Reiter, Robert E.
Witte, Owen N.
Saffran, Douglas C.
<120> TITLE OF INVENTION: PSCA: PROSTATE STEM CELL ANTIGEN AND USES THEREOF
<130> FILE REFERENCE: 30435.54USI4
<140> CURRENT APPLICATION NUMBER: 09/359,326A
<141> CURRENT FILING DATE: 1999-07-20
<150> PRIOR APPLICATION NUMBER: 08/814,279
<151> PRIOR FILING DATE: 1997-03-10
<150> PRIOR APPLICATION NUMBER: 60/071,141
<151> PRIOR FILING DATE: 1998-01-12
<150> PRIOR APPLICATION NUMBER: 60/074,675
<151> PRIOR FILING DATE: 1998-02-13
<150> PRIOR APPLICATION NUMBER: 60/113,230
<151> PRIOR FILING DATE: 1998-12-21
<150> PRIOR APPLICATION NUMBER: 60/120,536
<151> PRIOR FILING DATE: 1999-02-17
<150> PRIOR APPLICATION NUMBER: 60/124,658
<151> PRIOR FILING DATE: 1999-03-16
<150> PRIOR APPLICATION NUMBER: 09/038,261
<151> PRIOR FILING DATE: 1998-03-10
<150> PRIOR APPLICATION NUMBER: 09/203,939
<151> PRIOR FILING DATE: 1998-12-02
<150> PRIOR APPLICATION NUMBER: 09/251,835
<151> PRIOR FILING DATE: 1999-02-17
<150> PRIOR APPLICATION NUMBER: 09/308,503
<151> PRIOR FILING DATE: 1999-05-25
<160> NUMBER OF SEQ ID NOS: 27
<170> SOFTWARE: PatentIn Ver. 2.0
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<220> FEATURE:
<221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/359,326A

DATE: 08/24/2000
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Input Set : A:\Reiteri4.app
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70 <222> LOCATION: (604)
71 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
73 <220> FEATURE:
74 <221> NAME/KEY: misc_feature
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80 <222> LOCATION: (615)
81 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
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84 <221> NAME/KEY: misc_feature
85 <222> LOCATION: (636)
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89 <221> NAME/KEY: misc_feature
90 <222> LOCATION: (640)
91 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
93 <220> FEATURE:
94 <221> NAME/KEY: misc_feature
95 <222> LOCATION: (646)
96 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
98 <220> FEATURE:
99 <221> NAME/KEY: misc_feature
100 <222> LOCATION: (697)
101 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
103 <220> FEATURE:
104 <221> NAME/KEY: misc_feature
105 <222> LOCATION: (926)
106 <223> OTHER INFORMATION: any nucleotide (i.e., a, c, g or t)
108 <400> SEQUENCE: 1
109 agggagaggc agtgaccatg aaggctgtgc tgcttgccct gttgatggca ggcttggccc 60
110 tgcagccagg cactgccctg ctgtgctact cctgcaaagc ccaggtgagc aacgaggact 120
111 gcctgcaggt ggagaactgc acccagctgg gggagcagtg ctggaccgcg cgcatccgcg 180
112 cagttggcct cctgaccgtc atcagcaaag gctgcagctt gaactgcgtg gatgactcac 240
113 aggactacta cgtgggcaag aagaacatca cgtgctgtga caccgacttg tgcaacgcca 300
114 gcggggccca tgccctgcag ccggctgccg ccatccttgc gctgctccct gcactcggcc 360
115 tgctgctctg gggacccggc cagctatagg ctctgggggg ccccgctgca gcccacactg 420
116 ggtgtggtgc cccaggcctt tgtgccactc ctcacagaac ctggcccagt gggagcctgt 480
117 cctggttcct gaggcacatc ctaacgcaag tttgaccatg tatgtttgca ccccttttcc 540
W--> 118 ccnaaccctg accttcccat gggccttttc caggattccn accnggcaga tcagttttag 600
W--> 119 tgannacannat ccgcntgcag atggcccctc caaccntttn tgttgntgtt tccatggccc 660
W--> 120 agcattttcc acccttaacc ctgtgttcag gcacttnttc ccccaggaag ccttccctgc 720
121 ccaccccatt tatgaattga gccaggtttg gtccgtggtg tcccccgcac ccagcagggg 780
122 acaggcaatc aggagggccc agtaaaggct gagatgaagt ggactgagta gaactggagg 840
123 acaagagttg acgtgagttc ctgggagttt ccagagatgg ggcctggagg cctggaggaa 900
W--> 124 ggggccaggc ctcacatttg tggggntccc gaatggcagc ctgagcacag cgtaggccct 960
125 taataaacac ctgttggata agccaaaaaa aaaaaaaa 998
127 <210> SEQ ID NO: 2

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Input Set : A:\Reiteri4.app
Output Set: N:\CRF3\08232000\I359326A.raw

<211> LENGTH: 123
<212> TYPE: PRT
<213> ORGANISM: HUMAN PSCA (hPSCA)
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<222> LOCATION: (50)..(64)
<220> FEATURE:
<221> NAME/KEY: SITE
<222> LOCATION: (71)..(82)
<220> FEATURE:
<221> NAME/KEY: SITE
<222> LOCATION: (67)..(81)
<400> SEQUENCE: 2

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            20                  25                  30
Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
        35                  40                  45
Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
    50                  55                  60
Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
65                  70                  75                  80
Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
                85                  90                  95
Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
            100                 105                 110
Leu Gly Leu Leu Leu Trp Gly Pro Gly Gln Leu
        115                 120
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<210> SEQ ID NO: 3
<211> LENGTH: 441
<212> TYPE: DNA
<213> ORGANISM: MURINE PSCA (mPSCA)
<400> SEQUENCE: 3

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tgcagcctgg accagcacag ttgctttaca tcgcgcatcc gggccattgg actcgtgaca 180
gttatcagta agggctgcag ctcacagtgt gaggatgact cggagaacta ctatttgggc 240
aagaagaaca tcacgtgctg ctactctgac ctgtgcaatg tcaacggggc ccacaccctg 300
aagccaccca ccaccctggg gctgctgacc gtgctctgca gcctgttgct gtggggctcc 360
agccgtctgt aggctctggg agagcctacc atagcccgat tgtgaaggga tgagctgcac 420
tccaccccac ccccacacag g                                          441
```

<210> SEQ ID NO: 4
<211> LENGTH: 123
<212> TYPE: PRT
<213> ORGANISM: MURINE PSCA (mPSCA)
<400> SEQUENCE: 4

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 1               5                  10                  15
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RAW SEQUENCE LISTING DATE: 08/24/2000
PATENT APPLICATION: US/09/359,326A TIME: 14:51:23

Input Set : A:\Reiteri4.app
Output Set: N:\CRF3\08232000\I359326A.raw

```
194 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
195              20                  25                  30
197 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
198          35                  40                  45
200 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
201      50                  55                  60
203 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
204  65                  70                  75                  80
206 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
207                  85                  90                  95
209 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
210             100                 105                 110
212 Cys Ser Leu Leu Leu Trp Gly Ser Ser Arg Leu
213         115                 120
216 <210> SEQ ID NO: 5
217 <211> LENGTH: 131
218 <212> TYPE: PRT
219 <213> ORGANISM: HUMAN STEM CELL ANTIGEN (hSCA-2)
221 <400> SEQUENCE: 5
222 Met Lys Ile Phe Leu Pro Val Leu Leu Ala Ala Leu Leu Gly Val Glu
223   1               5                  10                  15
225 Arg Ala Ser Ser Leu Met Cys Phe Ser Cys Leu Asn Gln Lys Ser Asn
226              20                  25                  30
228 Leu Tyr Cys Leu Lys Pro Thr Ile Cys Ser Asp Gln Asp Asn Tyr Cys
229          35                  40                  45
231 Val Thr Val Ser Ala Ser Ala Gly Ile Gly Asn Leu Val Thr Phe Gly
232      50                  55                  60
234 His Ser Leu Ser Lys Thr Cys Ser Pro Ala Cys Pro Ile Pro Glu Gly
235  65                  70                  75                  80
237 Val Asn Val Gly Val Ala Ser Met Gly Ile Ser Cys Cys Gln Ser Phe
238                  85                  90                  95
240 Leu Cys Asn Phe Ser Ala Ala Asp Gly Gly Leu Arg Ala Ser Val Thr
241             100                 105                 110
243 Leu Leu Gly Ala Gly Leu Leu Leu Ser Leu Leu Pro Ala Leu Leu Arg
244         115                 120                 125
246 Phe Gly Pro
247     130
250 <210> SEQ ID NO: 6
251 <211> LENGTH: 123
252 <212> TYPE: PRT
253 <213> ORGANISM: HUMAN PSCA (hPSCA)
255 <400> SEQUENCE: 6
256 Met Lys Ala Val Leu Leu Ala Leu Leu Met Ala Gly Leu Ala Leu Gln
257   1               5                  10                  15
259 Pro Gly Thr Ala Leu Leu Cys Tyr Ser Cys Lys Ala Gln Val Ser Asn
260              20                  25                  30
262 Glu Asp Cys Leu Gln Val Glu Asn Cys Thr Gln Leu Gly Glu Gln Cys
263          35                  40                  45
265 Trp Thr Ala Arg Ile Arg Ala Val Gly Leu Leu Thr Val Ile Ser Lys
```

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PATENT APPLICATION: US/09/359,326A TIME: 14:51:23

Input Set : A:\Reiteri4.app
Output Set: N:\CRF3\08232000\I359326A.raw

```
266      50                  55                  60
268 Gly Cys Ser Leu Asn Cys Val Asp Asp Ser Gln Asp Tyr Tyr Val Gly
269  65                  70                  75                  80
271 Lys Lys Asn Ile Thr Cys Cys Asp Thr Asp Leu Cys Asn Ala Ser Gly
272                  85                  90                  95
274 Ala His Ala Leu Gln Pro Ala Ala Ala Ile Leu Ala Leu Leu Pro Ala
275              100                 105                 110
277 Leu Gly Leu Leu Leu Trp Gly Pro Gly Gln Leu
278          115                 120
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282 <211> LENGTH: 123
283 <212> TYPE: PRT
284 <213> ORGANISM: MURINE PSCA (mPSCA)
286 <400> SEQUENCE: 7
287 Met Lys Thr Val Leu Phe Leu Leu Leu Ala Thr Tyr Leu Ala Leu His
288   1               5                  10                  15
290 Pro Gly Ala Ala Leu Gln Cys Tyr Ser Cys Thr Ala Gln Met Asn Asn
291              20                  25                  30
293 Arg Asp Cys Leu Asn Val Gln Asn Cys Ser Leu Asp Gln His Ser Cys
294          35                  40                  45
296 Phe Thr Ser Arg Ile Arg Ala Ile Gly Leu Val Thr Val Ile Ser Lys
297      50                  55                  60
299 Gly Cys Ser Ser Gln Cys Glu Asp Asp Ser Glu Asn Tyr Tyr Leu Gly
300  65                  70                  75                  80
302 Lys Lys Asn Ile Thr Cys Cys Tyr Ser Asp Leu Cys Asn Val Asn Gly
303                  85                  90                  95
305 Ala His Thr Leu Lys Pro Pro Thr Thr Leu Gly Leu Leu Thr Val Leu
306              100                 105                 110
308 Cys Ser Leu Leu Leu Trp Gly Ser Ser Arg Leu
309          115                 120
312 <210> SEQ ID NO: 8
313 <211> LENGTH: 20
314 <212> TYPE: DNA
315 <213> ORGANISM: Artificial Sequence
317 <220> FEATURE:
318 <223> OTHER INFORMATION: Description of Artificial Sequence: RT-PCR PRIMER
320 <400> SEQUENCE: 8
321 ttctcctgct ggccacctac                                              20
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324 <211> LENGTH: 20
325 <212> TYPE: DNA
326 <213> ORGANISM: Artificial Sequence
328 <220> FEATURE:
329 <223> OTHER INFORMATION: Description of Artificial Sequence: RT-PCR PRIMER
331 <400> SEQUENCE: 9
332 gcagctcatc ccttcacaat                                              20
334 <210> SEQ ID NO: 10
335 <211> LENGTH: 408
336 <212> TYPE: DNA
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VERIFICATION SUMMARY DATE: 08/24/2000
PATENT APPLICATION: US/09/359,326A TIME: 14:51:24

Input Set : A:\Reiteri4.app
Output Set: N:\CRF3\08232000\I359326A.raw

L:118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1